Abstract of the Disclosure

A method for cleaning substrates typically after a CMP process is carried out thereon. The method includes providing a cleaning chamber, providing a substrate to be cleaned in the cleaning chamber, providing the chamber at temperature and pressure conditions favorable for formation of a supercritical cleaning fluid therein, and introducing the liquid or gaseous fluid into the chamber to form the supercritical cleaning fluid therein. The supercritical fluid removes particles and residues from the substrate without causing the formation of voltage potentials which may otherwise cause galvanic corrosion of metal lines or other device features on the substrates in the case of wet-cleaning applications.